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Claims:

- 1 1. A method of manufacturing an actuator comprising:
2 applying at least one layer of electrically-conductive material and at least one layer of
3 electrically-insulative material to an actuator finger, wherein
4 said conductive material and said insulative material are applied one layer upon another
5 in an alternating manner; and
6 said layer of insulative material is larger in area than said layer of conductive material
7 such that an insulative layer, applied to said actuator finger and sandwiching a conductive layer
8 between said insulative layer and said actuator finger, at least partially encloses and electrically
9 isolates said conductive layer.
- 1 2. The method of claim 1, wherein said conductive material and said insulative material are
2 applied one layer upon another in an alternating manner, the conductive material being the last
3 layer applied.
- 1 3. The method of claim 1, wherein said conductive material and said insulative material are
2 applied one layer upon another in an alternating manner, the insulative material being the last
3 layer applied.
- 1 4. The method of claim 3, wherein a window is provided in the last insulative layer for
2 placement of a bonding pad.
- 1 5. The method of claim 1, wherein said conductive material is a metal.

1 6. The method of claim 5, wherein said conductive material is from the group consisting of
2 Gold, Platinum, and Copper.

1 7. The method of claim 1, wherein said insulative material is a piezoelectric ceramic
2 material.

1 8. The method of claim 7, wherein said insulative material is lead zirconate titanate.

1 9. The method of claim 1, wherein said actuator finger is a hard disk drive micro-actuator
2 finger.

1 10. An actuator component comprising:
2 at least one layer of electrically-conductive material; and
3 at least one layer of electrically-insulative material, wherein
4 said conductive material and said insulative material are to be applied to an actuator
5 finger one layer upon another in an alternating manner; and
6 said layer of insulative material is larger in area than said layer of conductive material
7 such that an insulative layer, applied to said actuator finger and sandwiching a conductive layer
8 between said insulative layer and said actuator finger, at least partially encloses and electrically
9 isolates said conductive layer.

1 11. The system of claim 10, wherein said conductive material is a metal.

1 12. The system of claim 11, wherein said conductive material is from the group consisting of
2 Gold, Platinum, and Copper.

1 13. The system of claim 10, wherein said insulative material is a piezoelectric ceramic
2 material.

1 14. The system of claim 13, wherein said insulative material is lead zirconate titanate.

1 15. The system of claim 10, wherein said actuator finger is a hard disk drive micro-actuator
2 finger.

1 16. A piezoelectric actuator comprising:
2 an actuator finger to receive application of at least one layer of electrically-conductive
3 material and at least one layer of electrically-insulative material, said application being one layer
4 upon another in an alternating manner, wherein
5 said layer of insulative material is larger in area than said layer of conductive material
6 such that an insulative layer, applied to said actuator finger and sandwiching a conductive layer
7 between said insulative layer and said actuator finger, at least partially encloses and electrically
8 isolates said conductive layer.

1 17. The system of claim 16, wherein said conductive material is a metal.

1 18. The system of claim 17, wherein said conductive material is from the group consisting of
2 Gold, Platinum, and Copper.

1 19. The system of claim 16, wherein said insulative material is a piezoelectric ceramic
2 material.

1 20. The system of claim 19, wherein said insulative material is lead zirconate titanate.

1 21. The system of claim 16, wherein said actuator finger is a hard disk drive micro-actuator
2 finger.

1 22. A method of manufacturing an actuator comprising:

2 applying at least one layer of electrically-conductive material and at least one layer of
3 electrically-insulative material to an actuator block, wherein

4 said conductive material and said insulative material are applied one layer upon another
5 in an alternating manner to the actuator block in at least one actuator finger location; and

6 said layer of insulative material is larger in area than said layer of conductive material
7 such that an insulative layer, applied to said actuator block and sandwiching a conductive layer
8 between said insulative layer and said actuator block, at least partially encloses and electrically
9 isolates said conductive layer; and

10 separating said actuator block into a plurality of actuators, each actuator having at least
11 one actuator finger.

1 23. The method of claim 22, wherein separating is performed by a cutting tool from the
2 group consisting of a wheel blade, a straight edge knife, electric sputtering, ion milling, and
3 chemical vapor deposition.

1 24. The method of claim 22, wherein said conductive material is a metal.

1 25. The method of claim 23, wherein said conductive material is from the group consisting of
2 Gold, Platinum, and Copper.

1 26. The method of claim 22, wherein said insulative material is a piezoelectric ceramic
2 material.

1 27. The method of claim 26, wherein said insulative material is lead zirconate titanate.

1 28. The method of claim 22, wherein said actuator finger is a hard disk drive micro-actuator
2 finger.